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FILE COVERS 1907 - 20 Oct 2008 VOL 149 ISS 17

FILE LAST UPDATED: 19 Oct 2008 (20081019/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

=>

=>

Uploading C:\Program Files\Stnexp\Queries\10642438.str

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR

AL

Structure attributes must be viewed using STN Express query preparation.

=> s l1 and quaternary?

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:06:29 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS

34 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

10/923,271

PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L2 34 SEA SSS SAM L1

L3 42 L2

142881 QUATERNARY?  
L4 0 L3 AND QUATERNARY?

=> s l1 and docusate  
REGISTRY INITIATED  
Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:07:12 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS 34 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L5 34 SEA SSS SAM L1

L6 42 L5

335 DOCUSATE  
L7 0 L6 AND DOCUSATE

=> s l1 and ionic liquid  
REGISTRY INITIATED  
Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:07:41 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS 34 ANSWERS

10/923,271

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L8 34 SEA SSS SAM L1

L9 42 L8

298217 IONIC  
4 LIQUID  
0 IONIC LIQUID  
(IONIC(W)LIQUID)  
L10 0 L9 AND IONIC LIQUID

=> s l1 and ionic liquid  
REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:07:57 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS 34 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L11 34 SEA SSS SAM L1

L12 42 L11

298217 IONIC  
850264 LIQUID  
4497 IONIC LIQUID  
(IONIC(W)LIQUID)  
L13 0 L12 AND IONIC LIQUID

=> s l1 and ionic compo?  
REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

10/923,271

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:08:20 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS 34 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L14 34 SEA SSS SAM L1

L15 42 L14

298217 IONIC  
4073012 COMPO?  
3077 IONIC COMPO?  
(IONIC(W)COMPO?)

L16 0 L15 AND IONIC COMPO?

=> s l1 and compo?

REGISTRY INITIATED  
Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:08:57 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 1747 TO ITERATE

100.0% PROCESSED 1747 ITERATIONS 34 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 32433 TO 37447  
PROJECTED ANSWERS: 331 TO 1029

L17 34 SEA SSS SAM L1

L18 42 L17

4073012 COMPO?  
L19 12 L18 AND COMPO?

=> s l19 and ammonium  
431907 AMMONIUM  
L20 0 L19 AND AMMONIUM

=> s l19 and py<2002  
21968514 PY<2002  
L21 10 L19 AND PY<2002

=> d 1-10 ibib abs hitstr

L21 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:367958 CAPLUS

DOCUMENT NUMBER: 131:185603

TITLE: A novel synthesis of a highly heat-resistant  
organosilicon polymer using base catalysts

AUTHOR(S): Itoh, Masayoshi

CORPORATE SOURCE: Organic Performance Materials Laboratory, Mitsui  
Chemicals, Inc., Yokohama-city, 247-8567, Japan

SOURCE: Catalysis Surveys from Japan (1999), 3(1),  
61-69

CODEN: CSURFY; ISSN: 1384-6574

PUBLISHER: Baltzer Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new highly heat-resistant polymer containing silicon,  
poly[(phenylsilylene)ethynylene-1,3-phenyleneethynylene] (MSP), was prepared  
by dehydrogenative coupling polymerization between phenylsilane and  
1,3-diethynylbenzene in the presence of base catalysts such as alkaline earth  
metal oxides, metal hydrides and metal alkoxides. The preparation process,  
catalytic activities, reaction mechanisms and polymer properties were  
discussed.

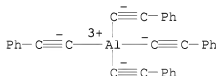
IT 4015-69-4

RL: CAT (Catalyst use); USES (Uses)

(preparation of a highly heat-resistant 1,3-diethynylbenzene-phenylsilane  
copolymer using base catalysts)

RN 4015-69-4 CAPLUS

CN Aluminate(1-), tetrakis(phenylethynyl)-, lithium, (T-4)- (9CI) (CA INDEX  
NAME)



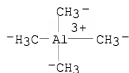
● Li<sup>+</sup>

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1992:266214 CAPLUS  
 DOCUMENT NUMBER: 116:266214  
 ORIGINAL REFERENCE NO.: 116:44943a, 44946a  
 TITLE: Methods and compounds for forming alkaline earth metal-containing films  
 INVENTOR(S): Kruck, Thomas; Heck, Stephan  
 PATENT ASSIGNEE(S): Kali-Chemie A.-G., Germany  
 SOURCE: Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

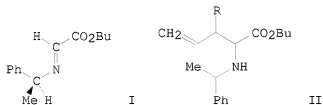
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4121369	A1	19920109	DE 1991-4121369	19910628 <--
PRIORITY APPLN. INFO.:			DE 1990-4020976	A1 19900703

OTHER SOURCE(S): MARPAT 116:266214  
 AB The title methods entail the decomposition of compds. described by the general formulas M(ZR14)2 (I), M(ZR13H)2 (II), or M(ZR12H2)2 (III) (M = Ca, Sr, or Ba, Z = Al, Y, or Sc, and R1 = a linear or branched C1-4 alkyl group or an aryl group, especially a Ph group). The compds. may be applied to a substrate as liqs. or vapors. Selected compds. of those described by the formulas I, II, and III are claimed.  
 IT 141646-37-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and use of, in alkaline earth metal-containing film formation)  
 RN 141646-37-9 CAPLUS  
 CN Aluminate(1-), tetramethyl-, strontium (2:1), (T-4)- (9CI) (CA INDEX NAME)



L21 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1989:193346 CAPLUS  
 DOCUMENT NUMBER: 110:193346  
 ORIGINAL REFERENCE NO.: 110:32125a, 32128a  
 TITLE: Studies on the reaction of  $\alpha$ -imino esters with organometallic compounds

AUTHOR(S): Yamamoto, Yoshinori; Ito, Wataru  
 CORPORATE SOURCE: Fac. Sci., Tohoku Univ., Sendai, 980, Japan  
 SOURCE: Tetrahedron (1988), 44(17), 5415-23  
 CODEN: TETRAB; ISSN: 0040-4020  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 110:193346  
 GI



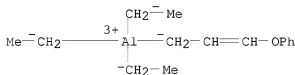
AB Benzylzinc reagent reacted with  $\alpha$ -imino ester I at the  $\alpha$ -carbon exclusively, though other organometallic reagents, such as Mg, Al, Cu, Ti, and B derivs., reacted at the nitrogen atom. Use of the (S)-amine as a chiral auxiliary of I created the R chirality at the imino carbon. Very high chiral induction was realized in the reaction of prenylzinc reagent with 8-(-)-phenylmethyl N-(methoxyimino)acetate. The reaction of I with heteroatom-substituted allylic organometallic compds. RCH:CHCH2MLn [R = OMe, MLn = ZnBr, Ti(OCHMe2)3, AlEt3Li; R = OPh, MLn = ZnBr, AlEt3Li; R = SMe, MLn = ZnBr, B(OMe)2] gave the corresponding  $\alpha$ -heteroatom substituted amino acid derivs. II. Here again, the allylic zinc reagent gave the adduct in higher yield than the corresponding Ti, Al, and B reagents.

IT 120169-59-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with chiral imino ester, stereochem. of)

RN 120169-59-7 CAPLUS

CN Aluminate(1-), triethyl(3-phenoxy-2-propenyl)-, lithium, (T-4)- (9CI) (CA INDEX NAME)



● Li<sup>+</sup>

L21 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1984:86283 CAPLUS  
 DOCUMENT NUMBER: 100:86283

ORIGINAL REFERENCE NO.: 100:13095a,13098a  
 TITLE: Composition containing chlorine, bromine, and magnesium suitable as a polymerization catalyst support  
 PATENT ASSIGNEE(S): Gulf Research and Development Co. , USA  
 SOURCE: Neth. Appl., 19 pp.  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

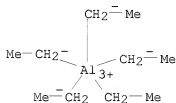
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 8201563	A	19831101	NL 1982-1563	19820414 <--
PRIORITY APPLN. INFO.:			NL 1982-1563	19820414

AB A catalyst support consists of MgCl<sub>2</sub> doped with Br in a mol. ratio from 1:99 to 50:50 (and especially from 2.5:97.5 to 15:85). Thus, the reaction product of 0.03 mol MgAl<sub>2</sub>Et<sub>8</sub> [15415-18-6], 0.056 mmol Et<sub>2</sub>AlCl [96-10-6], and 0.002 mol AlBr<sub>3</sub> was further treated with 0.3 mL Et benzoate [93-89-0] and subsequently with TiCl<sub>4</sub> to obtain a catalyst containing Mg 20.7, Al 0.05, Ti 0.8, Br 9.7, and Cl 53.2 weight%. In the polymerization of propene, the catalyst had an activity of 112,500 g polymer/g Ti, and the polymer [25085-53-4] had isotacticity 97% and intrinsic viscosity 3.7 dL/g (ASTM D-2857).

IT 82404-69-1  
 RL: USES (Uses)  
 (catalyst compns. containing, for stereospecific polymerization of alkenes)

RN 82404-69-1 CAPLUS

CN Aluminate(2-), pentaethyl-, magnesium (1:1) (CA INDEX NAME)



● Mg<sup>2+</sup>

L21 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1983:216200 CAPLUS  
 DOCUMENT NUMBER: 98:216200  
 ORIGINAL REFERENCE NO.: 98:32893a,32896a  
 TITLE: Composition containing chlorine, bromine and magnesium  
 INVENTOR(S): Beach, David L.; Zambelli, Adolfo  
 PATENT ASSIGNEE(S): Gulf Research and Development Co. , USA  
 SOURCE: U.S., 8 pp.



DOCUMENT TYPE: CODEN: USXXAM  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 English  
 PATENT INFORMATION:

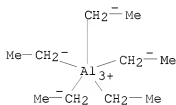
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4366086	A	19821228	US 1980-221064	19801229 <--
JP 58183707	A	19831027	JP 1982-56777	19820407 <--
PRIORITY APPLN. INFO.:			US 1980-221064	19801229

AB A support for Ziegler catalysts exhibiting high polymer yields and a high degree of stereospecificity is obtained by treating an organo Mg compound with a mixture of chlorinated and brominated Al compds. to give a composition having 1:90-50:50 Br-Cl mol ratio and 1:1.6-1:2 Mg-halogen mol ratio. Thus, a solution of 0.03 mol  $\text{MgAl}_2\text{Et}_8$  [15415-18-6] in 150 mL heptane was treated with a solution containing 0.056 mol  $\text{Et}_2\text{AlCl}$  [96-10-6] and 0.002 mol  $\text{AlBr}_3$  in 50 mL heptane for 6 h under reflux to give a precipitate containing Mg 20, Al 0.1, Cl 47.3, and Br 13.1%. The precipitate was treated with  $\text{EtOBz}$  in heptane at 70° for 4 h, then with  $\text{TiCl}_4$  at 140° for 3 h to give a catalyst containing Mg 20.7, Al 0.05, Ti 0.8, Br 9.7 and Cl 53.2%. Polymn of propylene using the catalyst and  $\text{Et}_3\text{Al}$  [97-93-8] gave isotactic polypropylene [25085-53-4] with intrinsic viscosity 3.7 dL/g and isotacticity 97%. Polymer yield was 112,500 g polymer/g Ti.

IT 82404-69-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for polymerization of propylene)

RN 82404-69-1 CAPLUS

CN Aluminate(2-), pentaethyl-, magnesium (1:1) (CA INDEX NAME)



L21 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1975:479316 CAPLUS  
 DOCUMENT NUMBER: 83:79316  
 ORIGINAL REFERENCE NO.: 83:12459a,12462a  
 TITLE: Reaction of alkaline earth metals with organomercury compounds in the presence of aluminumtrialkyls and aluminumtriaryls  
 AUTHOR(S): Ivanov, L. L.; Zavizion, S. Ya.; Zakharkin, L. I.

CORPORATE SOURCE: Inst. Elementoorg. Soedin., Moscow, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1975), 45(5),  
 1060-5  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB The aluminum compds.  $M(AlR_3R_1)_2$  ( $R = Et, Pr, Ph$ ;  $R_1 = Et, Pr, Ph, MeC_6H_4$ ;  
 $M = Ca, Sr, Ba$ ) were prepared by the reaction of  $AlR_3$  with  $HgR_1_2$  and  $M$ , with  
 or without solvents ( $Et_2O, THF, Me_3N$  etc.). In the presence of solvents,  
 the solvated products  $M(AlR_3R_1)_2 \cdot nL$  ( $n = 2, 3, 4, 6$ ;  $L =$  solvent) were  
 formed.  
 IT 56413-54-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 56413-54-8 CAPLUS  
 CN Calcium(2+), bis[1,1'-oxybis[ethane]]-, bis[(T-4)-tetraethylaluminate(1-)]  
 (9CI) (CA INDEX NAME)

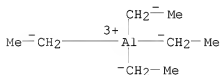
CM 1

CRN 56413-53-7  
 CMF C8 H20 Ca O2  
 CCI CCS



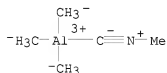
CM 2

CRN 14913-44-1  
 CMF C8 H20 Al  
 CCI CCS



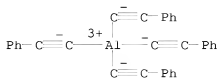
L21 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1970:132840 CAPLUS  
 DOCUMENT NUMBER: 72:132840  
 ORIGINAL REFERENCE NO.: 72:23791a  
 TITLE: Reactions of methyl isocyanide with aluminum  
 compounds  
 AUTHOR(S): Meller, Anton; Batka, H.

CORPORATE SOURCE: Inst. Anorg. Chem., Tech. Hochsch. Wien, Vienna, Austria  
 SOURCE: Monatsh. Chem. (1970), 101(2), 627-8  
 CODEN: MOCHAP  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 GI For diagram(s), see printed CA Issue.  
 AB Me3Al.C.tplbond.NMe was obtained by treatment of Me3Al with MeN.tplbond.C. It ignited spontaneously in both air and water. Treatment of AlCl3 with MeN.tplbond.C gave 20% (C6H9AlCl3N3)2 which had a cyclic structure (I).  
 IT 27681-26-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 27681-26-1 CAPLUS  
 CN Aluminum, [(isocyano-κC)methane]trimethyl-, (T-4)- (9CI) (CA INDEX NAME)



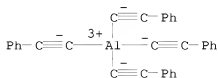
L21 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1965:498485 CAPLUS  
 DOCUMENT NUMBER: 63:98485  
 ORIGINAL REFERENCE NO.: 63:18132g-h,18133a  
 TITLE: Reactions of organoaluminum compounds with acyl peroxides and anhydrides  
 AUTHOR(S): Razuvaev, G. A.; Stepovik, L. P.  
 CORPORATE SOURCE: State Univ., Gorki  
 SOURCE: Zhurnal Obshchei Khimii (1965), 35(9), 1672-6  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB A mixture of (iso-PrO)3Al and 1 mole m-O2NC6H4CO2Ac in C6H6 under N gave, after evaporation and treatment with aqueous KOH, .apprx.10-12% AcOH, but m-O2NC6H4CO2CMe:CH2 was not isolated. Similarly ClCH2CO2Ac gave ClCH2CO2H; o-O2NC6H4CO2Ac gave AcOH (4%) in 10-15 min. EtAl(OEt)2 and 1 mole Bz2O2 in C6H6 under N gave in 3-4 days AcH, BzOEt, and BzOAl(OEt)2; similar treatment with BzO2Ac gave AcOH. The reaction of (iso-PrO)3Al with mixed acid anhydrides gave the alkoxy-Al salts of the stronger acid and an ester of the weaker acid. (EtO)2AlEt and acyl peroxides gave esters and alkoxy-Al salts of carboxylic acids. Both reactions appear to proceed through a complex formed at the Al atom with the O bridge of the anhydrides or 2 O atoms of the peroxides.  
 IT 68446-25-3P, Sodium tetrakis(phenylethynyl)aluminate  
 700798-30-7P, Aluminate, tetrakis(phenylethynyl)-  
 744953-02-4P, Aluminate, tetra-1-hexynyl-  
 RL: PREP (Preparation) (preparation of)  
 RN 68446-25-3 CAPLUS

CN Aluminate(1-), tetrakis(phenylethynyl)-, sodium, (T-4)- (9CI) (CA INDEX NAME)



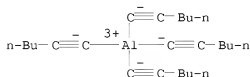
RN 700798-30-7 CAPLUS

CN Aluminate(1-), tetrakis(phenylethynyl)-, (T-4)- (9CI) (CA INDEX NAME)



RN 744953-02-4 CAPLUS

CN Aluminate(1-), tetra-1-hexynyl-, (T-4)- (9CI) (CA INDEX NAME)



L21 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1963:448453 CAPLUS

DOCUMENT NUMBER: 59:48453

ORIGINAL REFERENCE NO.: 59:8772e-g

TITLE: Synthesis of complex aluminum acetylides  
MAL(C.tplbond.CR)<sub>4</sub>, where M = Li, Na, or K, and their  
reactions with carbonyl compds.

AUTHOR(S): Zakharkin, L. I.; Gavrilenko, V. V.

SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1963), (6), 1146-7  
CODEN: IASKA6; ISSN: 0002-3353

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The reaction MALH<sub>4</sub> + 4HC.tplbond.CR → MAL(C.tplbond.CR)<sub>4</sub> + 4H<sub>2</sub>  
(where R = alkyl, aryl, or H) can be carried out with NaAlH<sub>4</sub> or KAlH<sub>4</sub> as

well as with  $\text{LiAlH}_4$ . With  $M = \text{Li}$  or  $\text{Na}$ , the reaction took place readily in tetrahydrofuran, while diglyme was the best solvent for the reaction with  $\text{Li}$  compds. Carbonyl compds. also reacted with the complex  $\text{Al}$  acetylides:  $\text{MAL}(\text{C.tplbond.CR})_4 + :\text{CO} \rightarrow :\text{C}(\text{OH})\text{C.tplbond.CR}$ . Thus,  $\text{MAL}(\text{C.tplbond.CPh})_4$  ( $M = \text{Li, Na, K}$ ) and  $\text{PhCHO}$  formed  $\text{PhC.tplbond.CCH}(\text{OH})\text{Ph}$  (70-80% yield);  $\text{NaAl}(\text{C.tplbond.CBu})_4$  and  $\text{PrCHO}$  formed  $\text{BuC.tplbond.CCH}(\text{OH})\text{Pr}$  (70%);  $\text{NaAl}(\text{C.tplbond.CBu})_4$  and crotonaldehyde formed  $\text{MeCH:CHCH}(\text{OH})\text{C.tplbond.CBu}$  (80%); while  $\text{NaAl}(\text{C.tplbond.CH})_4$  and butyraldehyde,  $\text{PhCHO}$ , or phenylacetone formed the corresponding acetylenic alcs. with yields of 40-50%,. At elevated temps., carboxylic acids could be prepared with good yields by the reaction  $\text{MAL}(\text{C.tplbond.CR})_4 + \text{CO}_2 \rightarrow \text{RC.tplbond.CCO}_2\text{H}$ . On passing  $\text{CO}_2$  through a solution of  $\text{NaAl}(\text{C.tplbond.CPh})_4$  in diglyme at  $120-50^\circ$ , 60% phenylpropionic acid was obtained.

IT 4015-69-4P, Lithium tetrakis(phenylethynyl)aluminate

68446-25-3P, Sodium tetrakis(phenylethynyl)aluminate

700798-30-7P, Aluminate, tetrakis(phenylethynyl)-

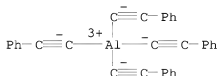
744953-02-4P, Aluminate, tetra-1-hexynyl-

RL: PREP (Preparation)

(preparation of)

RN 4015-69-4 CAPLUS

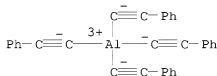
CN Aluminate(1-), tetrakis(phenylethynyl)-, lithium, (T-4)- (9CI) (CA INDEX NAME)



●  $\text{Li}^+$

RN 68446-25-3 CAPLUS

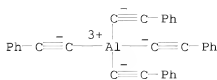
CN Aluminate(1-), tetrakis(phenylethynyl)-, sodium, (T-4)- (9CI) (CA INDEX NAME)



●  $\text{Na}^+$

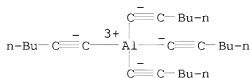
RN 700798-30-7 CAPLUS

CN Aluminate(1-), tetrakis(phenylethynyl)-, (T-4)- (9CI) (CA INDEX NAME)



RN 744953-02-4 CAPLUS

CN Aluminate(1-), tetra-1-hexynyl-, (T-4)- (9CI) (CA INDEX NAME)



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ACCESSION NUMBER: 1963:53473 CAPLUS

DOCUMENT NUMBER: 58:53473

ORIGINAL REFERENCE NO.: 58:9135h,9136a-b

TITLE: Organometallic reactions

INVENTOR(S): Kobetz, Paul; Pinkerton, Richard C.

PATENT ASSIGNEE(S): Ethyl Corp.

SOURCE: 4 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3068261	----	19621211	US 1960-5593	19600201 <--
PRIORITY APPLN. INFO.:			US	19600201

AB Alkali metal Al hydrocarbon complexes (I) are prepared by treating the corresponding B complexes with an Al trihydrocarbon compound. Thus, a stirred mixture of NaEt<sub>4</sub> (II) 150 (1 mole) and AlEt<sub>3</sub> (III) 228 parts (2 moles) is heated to 125° to give volatile BEt<sub>3</sub> (IV) and a residue consisting of equimolar proportions of III and NaAlEt<sub>4</sub> (V). By cooling the mixture to room temperature, V is crystallized as a readily filterable solid.

Similarly are prepared (B reactant, moles, Al reactant, moles, I product, and B trihydrocarbon product given): LiEt<sub>4</sub>, 1, III, 3, LiAlEt<sub>4</sub>, IV; II, 1, AlMe<sub>3</sub>, 1, NaAlMe<sub>3</sub>Et, IV; II, 1, AlMe<sub>3</sub>, 3, V, BMe<sub>3</sub>; NaBPr<sub>4</sub>, 1, III, 2, NaAlEt<sub>3</sub>Pr, BEt<sub>3</sub>-iso Pr compds.; NaBPh<sub>4</sub>, 1, Al(iso-Bu)<sub>3</sub>, 1, mixture of NaAl-iso-Bu-Ph compds., BPh<sub>3</sub> + B(iso-Bu)<sub>3</sub>; KBet<sub>4</sub>, 1, AlPr<sub>3</sub>, 1, KAlEtPr<sub>3</sub>, IV; NaB(CH<sub>2</sub>Ph)<sub>4</sub>, 1, AlPh<sub>3</sub>, 1, NaAlPh<sub>3</sub>(CH<sub>2</sub>Ph), B(CH<sub>2</sub>Ph)<sub>3</sub>. The reaction can be utilized for the selective separation of organometallic mixts. which include Al trihydrocarbon compds. as a component. Thus, a single phase liquid mixture of 42% PbEt<sub>4</sub> (VI) and 58% III 1000 (the mixture also containing

a

fraction of 1% of a thermal stabilizer for VI) is treated with II 760 parts at 100° with vigorous agitation to give vaporized IV and a mixture of immiscible V and VI. I are useful as alkylating agents in producing organo-metallic compds. of other metals and as electrolyte components for electrolytic processes. The B trihydrocarbon materials released in the process are valuable as components of high energy fuel compns.

IT 701193-48-8P, Aluminate, ethyltrimethyl-

RL: PREP (Preparation)

(preparation of)

RN 701193-48-8 CAPLUS

CN Aluminate(1-), ethyltrimethyl-, (T-4)- (CA INDEX NAME)

